UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 8, 2010

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Michael Horvath
First Energy Generation Corporation
Bruce Mansfield Plant
P.O. Box 1281
Shippingport, Pa 15077-0128

Dear Mr. Horvath:

On October 22, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Bruce Mansfield-Little Blue Run facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain “wet” handled CCRs. We thank you and your staff for your cooperation during the site visit. Subsequent to the site visit, EPA sent you a copy of the draft report evaluating the structural stability of the units at the Bruce Mansfield-Little Blue Run facility and requested that you submit comments on the factual accuracy of the draft report to EPA. Your comments were considered in the preparation of the final report.

The final report for the Bruce Mansfield-Little Blue Run facility is enclosed. This report includes a specific rating for each CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment(s) located at the Bruce Mansfield-Little Blue Run facility. These recommendations are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management units and, therefore, protection of human health and the environment, EPA believes their implementation should receive the highest priority. Therefore, we request that you inform us on how you intend to address each of the recommendations found in the final report. Your response should include specific plans and schedules for implementing each of the recommendations. If you will not implement a recommendation, please explain why. Please provide a response to this request by April 12, 2010. Please send your response to:

Mr. Stephen Hoffman
US Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

If you are using overnight of hand delivery mail, please use the following address:

Mr. Stephen Hoffman
US Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-237
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov

This request has been approved by the Office of Management and Budget under EPA ICR Number 2350.01.

You may assert a business confidentiality claim covering all or part of the information requested, in the manner described by 40 C. F. R. Part 2, Subpart B. Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when EPA receives it, the information may be made available to the public by EPA without further notice to you. If you wish EPA to treat any of your response as "confidential" you must so advise EPA when you submit your response.

EPA will be closely monitoring your progress in implementing the recommendations from these reports and could decide to take additional action if the circumstances warrant.

You should be aware that EPA will be posting the report for this facility on the Agency website shortly.

Given that the site visit related solely to structural stability of the management units, this report and its conclusions in no way relate to compliance with RCRA, CWA, or any other environmental law and are not intended to convey any position related to statutory or regulatory compliance.

If you have any questions concerning this matter, please contact Mr. Hoffman in the Office of Resource Conservation and Recovery at (703) 308-8413. Thank you for your continued ongoing efforts to ensure protection of human health and the environment.

Sincerely,
/Matt Hale/, Director
Office of Resource Conservation and Recovery

Enclosures

CHA's assessment of the Little Blue Run Dam indicates that it is in satisfactory condition. As described in the following sections, maintenance and monitoring will further enhance the condition of this dam.

4.2 Annual Report on Dam Condition

As part of our previously performed independent engineering review (Task 2) of the Little Blue Run Dam, CHA was tasked with reviewing annual inspection reports submitted to PA-DEP by FirstEnergy's engineering consultant. The GAI semiannual inspection reports reviewed by CHA do not include information regarding the location, size or age of the management unit. CHA recommends that the formats of the semiannual inspection reports be expanded to include this information.

4.3 Left Abutment Seepage Investigation

The PA-DEP Dam Safety Inspection Notice dated January 26, 2009 noted that the flow of water from numerous seeps on the left abutment is quite high. The PA-DEP recommends that a subsurface investigation be performed on the left abutment that includes rock coring in conjunction with pressure testing and the installation of piezometers. The results of the pressure testing could be compared to pressure testing conducted with the original foundation investigation prior to the dam's construction. This would also help to define the current permeability profile from the top of the embankment at about Elevation 1,100 feet through the toe of the dam at about Elevation 700 feet.

CHA recommends that FirstEnergy perform the subsurface investigation as outlined by PA-DEP. According to PA-DEP, the subsurface investigation plan was approved with the stipulation that the piezometers depths be submitted and approved prior to installation and be based on drilling results and apparent water level elevations. The borings are expected to be completed in the spring of 2010.

4.4 Installation of Piezometers

The PA-DEP recommended that additional piezometers be installed within the central portion of the embankment. It was recommended that at a minimum two borings with multiple tip piezometers be installed and screened at elevations from 800 to 900 feet within the central portion of the embankment. These additional piezometers will be used to detect the current pheratic surface within the dam and to monitor the embankment for any impacts from efforts to reduce seepage through the left abutment.

4.5 Installation of Inclinometers

The slope movements that have occurred since 2001 have been described as surficial and within the soil horizon. The PA-DEP recommended that inclinometers be installed to check for more deep-seated movement, possibly along soft clay seams inter-bedded with more durable rock that may be found during the subsurface investigation. CHA recommends that additional inclinometers be installed as outlined by the PA-DEP.

4.6 Stability Analysis

CHA was not provided with a maximum surcharge (flood condition) loading condition analysis, which while not specifically required under PA-DEP regulations, the US Army Corps of Engineers guidelines in EM-1110-2-1902 suggests a factor of safety under flood conditions of 1.4.

The calculated factor of safety for the rapid drawdown loading condition (1.1) is below the suggested US Army Corps of Engineers guidelines (1.3 for rapid drawdown from maximum storage pool) as shown in Section 3.3. CHA understands that it is undesirable to rapidly evacuate water containing CCW from the impoundment. Reportedly rapid drawdown is only possible via pumping off supernatant water above the sludge level at high volume flow rates. CHA suggests that in the event of an emergency at the dam (the classic rapid drawdown scenario) it may be favorable to evacuate impounded water to reduce stresses on the dam to reduce the risk of an uncontrolled release in the event of failure.

The last reported stability analysis performed for the Little Blue Run Dam embankment was in 1977, with the results shown on the As-Built Drawings. CHA recommends that an updated stability analysis be performed following the proposed subsurface investigation and installation of piezometers as outlined by the PA-DEP. Data from the new piezometer (and replacement piezometers) should be used to model the current pheratic surface in the embankment. Loading conditions which should be analyzed include those shown in Table 3 in Section 3.3, including the maximum surcharge loading condition which was not previously considered.

4.7 Settlement of Geotubes

It was recommended that the settlement of the geotubes that are retaining waste in the upper part of the valleys be monitored quantitatively. CHA recommends that the monitoring of the geotubes be performed at the same frequency as the surface monuments and the results be included in the semi-annual reports prepared and submitted to the PA-DEP.

4.8 Little Blue Run Saddle Dam

4.8.1 Seepage

The January 2009 PA-DEP inspection report noted that the valley below the saddle dam has been impacted by leachate and there is a pump return system for this water. It was recommended that the leakage in the valley and in the Mill Creek valley be evaluated.

4.8.2 Subsurface Investigation

The PA-DEP recommends that a subsurface investigation be conducted on the saddle dam as very little information is available about its original construction. The investigation should include the installation of piezometers. It should also be noted that the continued operation and maintenance of the saddle dam will require a dam permit from PA-DEP. Any modifications that may be found to be necessary as a result of the subsurface investigation and analysis will be required as part of the dam permit application process.

4.8.3 Animal Control and Filling of Existing Animal Burrows

Evidence of animal burrows was observed on the embankment slopes of the Little Blue Run Saddle Dam. CHA recommends that FirstEnergy keep notes of areas disturbed by animal activity, trapping of the animals, and repair to the areas.

4.8.4 Maintaining Vegetation Control

Appropriate grasses covered most of the Little Blue Run Saddle Dam embankments. However, there was a patch of brambles extending from the downstream toe to the crest of the embankment that requires cutting and/or removal in order to properly observe the embankment.